

## ARM. ŠAR, GK. ΣΑΡΟΣ '3600 YEARS'

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Arm. *šar* and Gk. σάρος (with its Latin extension *sarus*) '3600 years' are terms from Akkadian *šār*, *šāru*, a technical term for measuring great spans of time and space. Originally of Sumerian origin, Akkadian *šār*<sup>1</sup> is defined as 3600 years or leagues, the square of 60. W. G. Lambert<sup>2</sup> notes a passage *lis-si šar(šār.diš)*<sup>3</sup> *beri(danna) liriq arni* "May my guilt be distant, 3600 leagues away." This is similar to a passage in a text from Tarsus.<sup>4</sup> There

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1. Some comment on the mathematical parameters of this particular word can be found in Otto Neugebauer. *Vorlesungen über Geschichte der antiken mathematischen Wissenschaften. Erster Band: Vorgriechische Mathematik*. Second edition. Heidelberg: Springer Verlag. 1969: 97.

2. "DINGIR.ŠĀ.DIB.BA Incantations." *Journal of Near East Studies* 33, 1974: 267-322, esp. p. 274, line 19.

3. ŠĀR + DIŠ might be now read as *šuššār*, which is "216,000 (= 60 x *šar*).

4. Albrecht Goetze. "Cuneiform Inscriptions from Tarsus." *Journal of the American Oriental Society* 59, 1939: 1-16, esp. p.14,

are other uses: *úšatbi šār(im) bēra(danna)* "He drove it a *šar* away and lightened [my] vision";<sup>5</sup> and *lissi šār 1 DANNA ina SU.MU* "he strays a *šar* from me."<sup>6</sup> Another passage reconfirms the importance of the number 3600: *lissi 3600 ina 1 bēri ina zumri-ia* "Let him be 3600 leagues away from my body."

The word comes late into Greek, being found in the fragments of the historian Abydenus (second century A.D.), who composed a study of the Assyrian and Babylonian dynasties, *De Chaldoeorum regno*,<sup>7</sup> written, presumably, in the reign of Antoninus<sup>8</sup>. There we

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line 21.

5. W. G. Lambert. *Babylonian Wisdom Literature*. Oxford: Clarendon Press. 1960: 52.17.

6. Jean Nougayrol. "Textes Religieux." *Revue d'assyriologie et d'archéologie orientale* 65, 1971: 163.9.

7. There was a definite Greek interest in Babylonia and Assyria; their then fertile lands made those kingdoms commercial strongholds, and many Greeks lived there. Babylonian astronomy and astrology had a definite impression on the Greeks, and it was known to bilingual Greeks. Babylonian astronomical tablets were written well into the Seleucid period, and the latest text can be dated 75 C.E. (see Otto Neugebauer. *The Exact Sciences in Antiquity*. Providence, R.I.: Brown University Press. 1957. These dated texts may be found in Abraham J. Sachs, T.G. Pinches and J.N. Strassmaier. *Late Babylonian Astronomical and Related Texts*. Providence, R.I.: Brown University Press. 1955: 1-103.); that the Babylonian religion had an even earlier influence on the Greeks is, of course, well known. These astronomical ideas explain why the Babylonian series on a base 60 correspond to the Hellenic concept of sixty second and sixty minutes.

8. Karl Müller. *Fragmenta Historicorum Graecorum*. Paris: Firmin-Didot. 1928, vol. 4: 297-285.

read Σάρος δέ ἐστιν ἑξακόσια καὶ τρισχίλια ἔτεα. "A *sarus* is 3600 years." The word is later used in Eusebius of Caesarea's famous *Chronicles*; there he catalogues the ages of man from the time of Abraham's birth (2016/15 B.C.E.) to 303 C.E. But he also discusses the Babylonian king list, which was fabulous: ὥς γίνεσθαι ὁμοῦ πάντας βασιλεῖς δέκα, σάρους δὲ ἑκατὸν εἴκοσι "Thus there were altogether ten kings, and they reigned 120 *sari*" (432,000 years)<sup>9</sup>. The word also appears in Hesychius, who cannot confirm its amount<sup>10</sup>, and in the Suidas<sup>11</sup>, which notes, quite originally, that a *šar* is a Babylonian cycle of 222 months.

Thus the Akkadian and Greek data, with the exception of the late statement in the Suidas, seems to show that the Akkadian term *šar* was clearly understood in the second century C.E., even though Babylonian astronomical writing had stopped by then. Gk. Σάρος, which was surely little used in Greek, reflected the original Akkadian meaning. The Greek spelling did not reflect the palatalization of the Akkadian simply because no such sound was available in the Greek alphabet<sup>12</sup>.

Yet the term exists in Armenian in the form *šar*, appearing in Moses of Khorene's *History* and in the fifth century Armenian

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9. Alfred Schoene. *Eusebii chronicorum liber prior*. Berlin: Weidmann. 1875: 9-10.

10. σάρος· ἀριθμός τις παρὰ Βαβυλωνίοις.

11. Σάροι. μέτρον καὶ ἀριθμὸς παρὰ Χαλδαίοις . οἱ γὰρ ρκ' σάροι ποιοῦσιν ἐνιαυτοὺς βσκβ' κατὰ τὴν τῶν Χαλδαίων ψῆφον, ἔπειρ ὁ σάρος ποιεῖ μῆνας σεληνιακῶν σκβ', οἱ γίνονται ιη', ἐνιαυτὸ καὶ μῆνες ἔξ.

12. Armenian seems to reproduce a Gk. /σ/ as an /s/ even when the Gk. /σ/ is derived from a Semitic /š/, and the Armenians knew it. Note Arm. *sabit'ay*, Gk. σαβιθά 'a Mass,' but Arm. *šabat'*, Syr. *šabbaṭā* 'the sabbath.'

translation of the (now largely lost) Greek version of Eusebius' *Chronicles*. Assuming that Khorenatsi was of the seventh century, the first instance of this word in Armenian is then from Eusebius' *Chronicles*, Book I. The passage (taken from the *Nor Bargirk'*) reads: "he ruled for ten *šars*, and a *šar* is the number for 3600 years."<sup>13</sup> this is very close in shape to the passage in Khorenatsi (1913: 13) where we also read: "Abydenus . . . said . . . 'Aghavros ruled for ten *šars*,' which is 36,000 years."<sup>14</sup> What is perplexing is the Armenian palatal sibilant /š/, a sound which could not have been derived by loan from the Greek equivalent. Elsewhere it has been said that this term is a loan directly from Akkadian<sup>15</sup>, but I have also argued that the evidence for direct Akkadian loanwords in Armenian is so slight that it cannot be taken seriously. Rather, such vocabulary that is claimed as Akkadian is, in almost every instance, known instead from Syriac (or Arabic, in the case of some later loans)<sup>16</sup>. What, then is the source of this palatalization? It seems that no direct link to a Syriac form can be made<sup>17</sup>, from

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13. Թագաւորել նմա շարս տասն, բաժանեալ զմի շար ի թիւ երից հազարաց եւ վեցհարիւր ամաց.

14. ասէ . . . Աբիւղենոս . . . «Թագաւորեալ Աղաւբոս շարս տասն», որ լինին ամբ երեսուն եւ վեց հազար.»

15. Here see Gevork B. Djahukian. Հայոց լեզվի պատմութիւն: Նախագրային ժամանակաշրջան. Yerevan: Press of the Armenian Academy of Sciences. 1987: 470.

16. Here see my "'Akkadian' words in Armenian." *Annual of Armenian Linguistics* 10, 1989: 73-83.

17. The term is, however, known in Syriac in its Greek form, Syr. *sār'os*, but in that form appears only in the *Chronicles* of Michael the Syrian (*Chronique de Michel de Syrien*, ed. Jean Baptist Chabot, Paris: E. Leroux. 1910, vol 4: 12u). Michael died, however, in 1199, and the Syriac text is accordingly

which the Armenians could have gotten the word in its Semitic form. And though there is a Syriac epitome of Eusebius' *Chronicle*,<sup>18</sup> a careful inspection of its Latin translation shows no possibility for the use of the number *šar* in the Syriac epitome<sup>19</sup>. It is not at all impossible that an Akkadian word could have come into Syriac by loan, for it was the Aramaic language, of which Syriac is a dialect, which replaced Akkadian as the spoken language of Mesopotamia;<sup>20</sup> it reigned until replaced by Arabic. Nevertheless, there is no evidence that Akk. *šar* existed in Syriac, and that language cannot be an immediate candidate for the Armenian term.

It is at this point that we think again of loans. There is perfectly good evidence that language A can leave residue in language B even when there has been no actual contact between

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vastly too late to be of interest here.

18. The *Epitome Syria* (ex Eusebi chronicorum canonum libro deprompta). The Syriac version exists in one manuscript which reposes in the British Museum, MS 14643. For a Latin translation, see Emile Rödiger, in Alfred Schoene, *loc. cit.* volume 2, Berlin: Weidmann. 1866 (sic): lvii, 203–219. There is also a full translation of the Armenian version into German by the redoubtable Josef Karst. *Eusebius Werke*. Volume 5. *Die Chronik. Aus dem armenischen übersetzt mit textkritischen commentar*. Leipzig: J. C. Hinrich. 1911.

19. We might here consider the Syriac scholar whom Khorenatsi cites as his source, Mar Abas Catina; were it not that Mar Abas Catina is nowhere else known other than in Khorenatsi, we might take him seriously as a source.

20. Stephen A. Kaufman wrote on this theme, but made no mention of *šar*. See his *The Akkadian Influences on Aramaic*. Oriental Institute of Chicago, Assyriological Studies No. 19. Chicago: University of Chicago Press. 1971.

the societies. An example would be Arm. *toyion*; this term appears in the medieval *Lives of the Saints*<sup>21</sup>. and we now know that this is a term for the bird 'Babbler,' the Hindi equivalent for which is *ghuiyām*, and this word came to Armenia in a story about a saint which had Indian overtones. Other Armenian ornithological terms have come from India; I could note Hindi *tota* 'parrot,' which begets Armenian *t'ut'ak* via Per. *توتاك* (*tūtāk*)<sup>22</sup>.

Although it is entirely likely that the Greeks got their word *σῶρος* directly from Babylonian speakers, we cannot make the same claim for the Armenians. Further, it is unlikely that the Armenians, had they acquired this word before 75 C.E., would have held it in their memory for nearly four hundred years after the collapse of Babylonian science, for it was a word that had no use in Armenian culture. Khorenatsi only uses the term when measuring the early Babylonian and Assyrian kingships, and he derives his material from Abydenus ( . . . *սսէ . . . Աբիηβννυ*). Lacking any form of transference other than dispersion, it would seem that Arm. *šar* is derived from Akkadian, though we do not know the path it took into Armenian. Yet it is also equally easy to imagine that an unattested Syriac historical text survived till the fifth century in the Armenian lands. Those who accept as plausible the existence of Khorenatsi's Syriac informant, Mar Abas Catina, will find solace in these words.

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21. Վրբ. Եւ վկ. 1884.I: 543: *դոյիոն իմն հաւ, որպէս ասնն ժոնդագործք քէ ի հնդկաց է*. "There is a bird, the *toyion*; it is, as they say, a pest, and come from India."

22. This from my *Classical and Middle Armenian Bird Names*. Delmar, New York: Caravan Books. 1978. 212, 144.